

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1 - 7. (Cancelled).

8. (Currently Amended) A fuel cell system control unit comprising:

a first power converter electrically connected to an electric power system-through;

an electric load connected to an electric line which ties the electric power system and the first power converter;

a set of fuel cells connected to a DC circuit of said first power converter through a second power converter;

a secondary battery connected to said DC circuit through a third power converter;

a system voltage detecting means which detects an AC voltage on the power system and outputs its detected value;

a receiving current detector for detecting the receiving current which is total of a current flowing through said first power converter and a current flowing through an the electric load;

means for calculating a receiving electric power based on a the receiving current detected by said receiving current detector and a the system voltage detected by said system voltage detecting means;

~~means for calculating the output power of the first power converter;~~

means for controlling said third power converter so that said receiving power does not exceed a receiving power threshold value;

means for calculating the output power of the secondary battery;

means for calculating the output power of the set of fuel cells;

means for calculating the load power which the load consumes based on the receiving power and power, the output power of the first power converter secondary battery, and the output power of the set of fuel cells;

means for calculating an average value of the load power by filtering the load power calculated;

means for controlling the second power converter so that the output power of the ~~second power converter~~ set of fuel cells approaches the average value of load power; and

means for controlling the first electric power converter so that a DC side voltage of the first electric power converter approaches a predetermined DC voltage instruction value.

~~means for controlling said third power converter so that the secondary battery outputs a power value corresponding to the power value of which said receiving power exceeds the preset receiving power value due to the increase of said load power.~~

9. (Previously Presented) The fuel cell system control unit of claim 8, further comprising:

a voltage regulating means which feeds back a DC voltage value detected by said first converter and outputs a current command value so that the

product of the fed-back DC voltage value by the current command value may be equal to a power command value;

an automatic current regulator which feeds back said detected AC current value and outputs an output voltage command value to make the current equal to said current command value;

a pulse width modulation (PWM) means which receives said output voltage command value and outputs pulses to drive the converter; and

a control unit which controls charging and discharging of the power system and power according to said voltage command value.

10. (Previously Presented) The fuel cell control system according to claim 8, wherein said means for controlling said first-third converters further comprises:

a first current control means to make the current command value equal to the current of the fuel cell; and

a second current control means to make the current command value equal to the current of the secondary battery.

11. (Cancelled)

12. (Previously Presented) The fuel cell control system according to claim 8, wherein said control means comprises a means for calculating average values from said detected load power values.

13. (Cancelled)